

A Work Project, presented as part of the requirements for the Award of a Masters Degree in Management from the Faculdade de Economia da Universidade Nova de Lisboa.

INTEGRATIVE WORK PROJECT IN STRATEGY
SMALL AND MEDIUM ENTERPRISE COMPETITIVENESS:

Internationalization Strategy

HOLOS Mobile - Angola

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Number 277

A Project carried out on the Management course, with the supervision of
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12th June 2009

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Executive Summary

Nowadays, direct marketing tools are being used by companies that want to expand their businesses, aim to distinguish its customer service and improve its stakeholders' relationship.

HOLOS Mobile, developed by the Portuguese software company HOLOS S.A. throughout a partnership with Google, is an innovative product that can be used in any device that have access to internet (PC/3G cell phones/PDA). This software enables companies to analyse data and generate knowledge management concerning business models, namely consumer behaviour, targeting, and segmentation of markets. In addition, this tool will indirectly benefit several players in the market and will gain advantage to the traditional marketing methods used, creating a new concept of relationship marketing.

This product is currently being customized by HOLOS to *Banco Espírito Santo* (BES) and although is still not possible to predict if this pioneering application will follow the tendency of success that other HOLOS' products achieved, there are positive insights regarding its potential, giving initial trials and testing.

After the investment done by InovCapital in the company, HOLOS Board decided it was time to expand its activities to emergent markets. The objectives to reach with this international expansion are focused in capture new business opportunities, increase sales, maintain a competitive advantage and increase reputation among companies in the industry.

HOLOS believes that Angola is an attractive target market and that deeply needs for ICT solutions. The stable environment that is started to be lived in the country, together with the historical, linguistic and cultural connections with Portugal gives HOLOS a first mover advantage when compared to possible competitors.

Based on my research and the environmental conditions, I developed an internationalization strategic plan of measures and recommendations that aim to support HOLOS' entrance in the Angolan market and further commercialization of its new product, HOLOS Mobile.

1. Description of the firm

Established in May of 1996, HOLOS S.A. is based in the Technological Pole of Innovation Companies, inside the University Campus of Science and Technology of

Lisbon's Universidade Nova¹. Nowadays HOLOS administration is composed by four stockholders - Pedro Sousa (the president), João Paulo Pimentão, Hélder Silva (three of the five original founders), and a non-executive partner that represents InovCapital – *Sociedade de Capital de Risco*. Each one of the executives has 22% of stocks and 34% belongs to InovCapital. The non-executive partner is always present in the Board of Directors meetings but does not vote in business decisions issues. He is a pure financial investor.

HOLOS main activity is the development and implementation of several Information and Communication Technologies (ICT) customized projects both at national and international level (**Annex 1**). The company uses an innovative technology in the development of its products/services that is very effective in “dematerializing information”². Currently, HOLOS' main business areas are: Research and Technology Development, Consulting and Education and Communication¹.

HOLOS has a total of forty seven employees. Thirty three are full time employees, being the majority of them engineers working in a team based projects development in the different areas mentioned above and supervised by the administration members. It has also five trainees under the InovJovem program and six part-time employees that work on the Communication and Education area. Since January 2009 HOLOS has three other local employees working in Dubai in the first and only company's foreign office.

HOLOS has also been able to develop products that anticipate the needs of several public and private institutions. As a result HOLOS is, for 12 years now, involved in public administration modernization, providing consultancy services and developing operational information and decision support systems, improving the relationships between citizens and public administration¹ (ex: ASAE, *Inspecção Geral da Educação*, *Instituto da Água*, etc.). In the private sector HOLOS introduces in several organizations new operational and financial management systems (ex: Ford, Grupo BES, BPI, Caixa Geral de Depósitos, Imprensa, Agência Lusa, etc.). HOLOS

¹ Source: www.holos.pt

² This concept consists in monitoring physical evidences with digital evidences. For example information that is printed in a fax tends to become useless during time, but if digitalized, (dematerialized) this information has timeless utility and could be accessed easier. This technology enables HOLOS to decompose, analyse and manage clients' data and for HOLOS' clients to support strategic business decisions, and analyse individual consumers' behaviour.

main goal is to develop innovative customized systems and implement them in its clients' organizations, until becoming essential to its core business.

HOLOS last year's revenues were around 2 million Euros with 30% of the business volume corresponding to the public sector and 70% to the private sector (**Annex 2**).

2. Business Mission and Strategic Objectives

HOLOS mission is to “contribute to organizations' technologic development, providing innovative products and services that improve the information access” while its vision is to “achieve in 5 years national and international recognition as a leading top quality provider of integrated solutions that aim to increase the operational efficiency of its clients”. HOLOS mantra is “Always perform better in a holistic perspective¹ for the ICT sector”.

HOLOS administration established several strategic objectives for this year of 2009: achieve revenues of 2.3 million Euros; to assure activity and results of HOLOS Dubai; and create HOLOS Angola. As long-term strategic objectives the company wants to: create solutions that comply with its customers' requirements¹; understand the technologic changes and anticipate new challenges, offering strategic benefits through the most advanced technologies in Information Systems¹; and extend data processing business throughout Middle East.

The main values that guide HOLOS relationship with the several stakeholders can be enumerated as follow: the main concern is to maximize stockholders value by establishing a clear and open relation with them; in second place is the long-term relation between the company and the clients being HOLOS main goal to become essential to their core competences; in third place is the relation among employees, as everyone can talk directly to the administration considering any problem or suggestion, not being necessary to talk previously to the directors (flat organization); in last place, but not less important, are HOLOS' partners that are essential to leverage its positioning in the market.

Those partners that enabled HOLOS to provide more effective solutions and complement its offer are: Google, Oracle, SAS Institute Portugal, Brandia/NovoDesign,

¹ Working in a holistic perspective consists to solve any problem related to ICT after beginning a relation with a client.

KPN Qwest, Portugal/Novis and ViaNet.works (**Annex 3**). HOLOS uses its partners' knowledge to improve its business competences not restraining itself to resell its partners products. HOLOS adds value and a set of features to the solutions provided by its partners according to clients' needs.

3. HOLOS Mobile Industry Map

In the HOLOS Mobile system development, tools like Google Maps, virtual software, HOLOS own technology and Google and clients' datacenters were used, but the system main input was Pedro Sousa's innovation and creativity capacity, in inventing, a revolutionary mobile marketing tool.

This customized application was developed in 2008 and is mainly directed for companies with a high number of collaborators (associates, employees, suppliers, customers, etc.). The exact number of collaborators is difficult to estimate. However, HOLOS assumes that a client should have a minimum of 100.000 collaborators and that the membership rate to the program should be around 10% to become profitable.

In a first phase, HOLOS decided to target the application only for the banking and insurance sectors, but further can be extended for companies in other industries (**Annex 4**). Even if the targeted companies were banks and insurers, the HOLOS Mobile application will be used by those companies' individual customers. The decision to present it first, to these two sectors was taken once HOLOS had already developed some products/services for the banking and insurance sectors. Another factor was that banks and insurers are concerned to differentiate and improve its customers' service level by offering innovative products.

This application could be used by submitting to a security web site if using a PC or by downloading the application if using a 3G mobile phone/PDA. In order to be accessed through a mobile phone the region where the individual customer is located needs to be covered by mobile operators 3G services¹. After the individual customer enters his personal username and password he will see his actual position georeferentiated in a Google Map/Google Earth technology. The application will then represent in the map, relative to his position, any point of interest (a specific type of restaurants – traditional Portuguese food, Sushi food, Italian food, etc.; any kind of stores; gas stations; pharmacies; etc.) that the individual customer may want to see.

¹ 3G services among other features allow access to internet through a mobile phone.

However, it will only show those that have an agreement with the bank/insurance company and not all the existing points of interest near him.

The points of interest will vary from client to client depending on its business. For example, a bank will define as points of interest those “shop owners” which have an account in that same bank, and who may provide a service to individual customers (ex: restaurants, clothes stores, book stores, music stores, groceries, etc.). An insurance company will identify as possible points of interest those “shop owners” who are covered by its business network (ex: doctors’ offices, analysis centres, pharmacies – for medical insurances clients; gas stations, automotive workshop, garages, reparation centres – for motor insurances clients; etc.).

If we are looking for an Italian restaurant to have lunch, the restaurants that are recommended have the possibility to differentiate its offer by presenting different types of discounts (ex: 20% discount in the daily menu, “happy hour” from 13-15hrs, etc.). It will be up to the customer to choose the most suitable one and follow the Google map instructions until he arrives to the chosen restaurant. The discounts will be given by presenting the mobile phone message to the “shop owner”.

The main functionalities that differentiates this application from a normal GPS device and other existing mobile marketing products/services is that we can visualize in Google Map/Google Earth technology the “shop owner’s” exact location and corresponding discounts, relative to the customer’s actual position (**Annex 5**).

So, in the end everyone will benefit by using the HOLOS Mobile application. Banks will not loose capital, once customers that pay its bill with a debit card, money would not get out of the bank’s system submitting only an accounts transfer; as for an insurance company, they will benefit from discount offers of their partners (medical centres, automotive workshops, etc.). At the same time banks, insurance companies and “shop owners” will retain and captivate new customers. As for individual customers, they will benefit from discounts offered from the “shop owners”.

The HOLOS Mobile whole system installation and customization is done by HOLOS technicians. Before the application starts to be customized it will be necessary to HOLOS’ clients define quite well the strategy they wish to adopt. The strategy will depend from the amount and variety of points of interest, and complementary modules they desire their collaborators to get access to.

There are two ways that a potential client can acquire the HOLOS Mobile software. The first one consists in buying a certain number of licenses that give it the

right to explore this software during a limited period. The potential client is then responsible for the system actualization and maintenance. It can also free-offer or charge a fee to its collaborators for the use of these licenses. Further if it wants to buy more licenses it should contact HOLOS and renegotiate its selling price. In this case the potential client will only have to pay for each license it acquires.

The second commercial approach is HOLOS that provides a service to its potential client (Software as a Server - SAAS) where both parts agree how many individual customers will have access to the HOLOS Mobile and the contract duration. Therefore is up to the client to charge, or not, a fee to its individual customers. The potential client will compensate HOLOS for the use of the software and pay another amount depending on the number of collaborators that will have access to the application. In this case HOLOS must store the whole information and will be responsible for the system actualization (using its clients' datacenter) and maintenance. The client will pay for all services provided incurring total costs. Therefore, economies of scale can be achieved once the higher number of individual customers that have access to the HOLOS Mobile, the lower will be the cost per client (**Annex 6**).

Another important aspect is the contract duration. The longer the contract length the cheaper will be the service cost per year. Even if the maintenance costs tend to increase the customization/set up costs are diluted throughout the years, becoming cheaper for potential clients to sign a long term contract (**Annex 7**). By providing a SAAS, HOLOS can also increase protection against software piracy, since final customers can only access the application through internet and the software will not be loaded to the end user's device.

To conclude, this unique mobile marketing tool will allow HOLOS' clients and "shop owners" in the retention and acquisition phase of new customers, providing better decision support processes. Due to the greater knowledge about them, a company will be able to distinguish customers from each other, segmenting them and focusing single targets. HOLOS Mobile also focuses the innovative dynamic services to the "mobile generation"¹ but due to its simplicity it will attract all people that have access to internet.

4. Purpose of the work

¹ The generation that appeared at the same time that mobile devices.

The Integrative Work Project (IWP) in Internationalization Strategy has the purpose to analyze the current competitiveness of HOLOS in the domestic market and, consequently, the proposal and implementation of practical solutions to fulfil the international expansion to the desired markets. This study is based on the HOLOS Mobile features and players characteristics that are involved in the HOLOS Mobile usage.

Once the application studied is starting to be commercialized in the domestic market possible suggestions are done for a better spreading out among our society. Therefore, and taking into consideration HOLOS desire in expanding its solutions to the countries where they are established, opportunities and threats on the Angolan market are identified for a further HOLOS Mobile commercialization.

Following the strategy implemented when entering in Dubai and HOLOS current negotiation processes with Angolan investors several recommendations are done considering the Angolan market conditions.

5. Methodology

The first insights to start structuring the different points I would approach during the work were based on the literature and several workshops offered by the IWP strategy program

The internal scanning process was based on several interviews made to HOLOS Executive President Pedro Sousa, HOLOS Sales Director José Armando Silva, and HOLOS Quality Director Ana Gaspar. Pedro Sousa was responsible for an overall introduction about HOLOS business, and some of HOLOS best practices that differentiate its offers from its competitors. José Armando Silva was a useful help in explaining HOLOS Mobile features and the competitive industry environment where the product will be commercialized. Ana Gaspar contribution was also important to understand HOLOS value chain, the different business areas, and the opportunities that will emerge if the company becomes certified.

After being able to represent HOLOS Mobile industry map, the external scanning was elaborated based on web research and the reading of some papers, to analyse each player role and relative importance in the market structure. Once HOLOS Mobile is a pioneering application, competitors, or possible copying threats were not easy to identify. An overall analysis was made considering HOLOS' competitors in

other business areas, and several different identities identified in the national market as possible ones to develop similar software.

The Angolan market conditions, strengths, and weakness investigation were done using mainly companies' websites, annual reports, and published papers.

6. External Scanning of the Domestic Market

HOLOS Mobile is in its very initial introduction phase in the domestic market. As a result, market size is still not possible to define and the only client that has acquired this software application is *Banco Espírito Santo* (BES) one of the Portuguese five main banks.

The Portuguese software services industry is in constant change as new products, services and applications are always being developed and very often some of them are not even commercialized or implemented. Revolutions occur every year due to technology and internet impact in how business should be conducted and set up with the final clients.

The high level of diversification and growing strategic commitment of Portuguese software firms operating in the market intensifies the rivalry among them. However, the Portuguese market has a greater demand for software than its actual production, meaning that the market has enough space for all software companies and a great growth capacity¹ (**Annex 8**). For these reasons companies in the industry should specialize themselves in distinct business areas to make rivalry less intense and beneficial to every company. However, the final consumer bargaining power will tend to decrease when willing to acquire more specific software, as he will not have a vast variety of qualified suppliers to choose from.

In the European market HOLOS cannot register a patent, as computer-implemented inventions which only solve a business problem, rather than a technical problem, are considered not patented as lacking an inventive step². For this reason the HOLOS Mobile cannot be protected against possible copying from other software services companies. Therefore, the main barriers to enter in the development and commercialization of this software application are very low.

¹ Portugal is suited in the 3rd phase of software development.

² Source: www.wikipedia.org

In the Portuguese ICT market there are no government policies that protect insider companies. It is also difficult for a SME like HOLOS to provide in the short-term all industry segments with the HOLOS Mobile. So, it is possible for any company that possesses the resources and capabilities to develop such tool and easily enter the market. However, the innovation and technological capacity of a firm, together with its ability to attract potential clients are crucial to compete against HOLOS.

My research results conclude that there is any company in the world that has developed a similar product to the HOLOS Mobile except *Automóvel Club de Portugal* (ACP). In a partnership with Vodafone, ACP has developed the ACP Mobile¹ application that has parallel functionalities to the one produced by HOLOS. However, due to this company business characteristics (very different from a software service provider), this innovative tool will be used to differentiate the service provided to ACP associates, and not to be commercialized with other companies. This example shows us that HOLOS Mobile potential clients could directly invest or benefit from partnership synergies and also develop their own software application.

Mobile phones producers, like Nokia, could be considered as potential threats in developing such tool, once they are always looking for new functionalities to add to their mobile phones/PDA and have a greater capacity to innovate and come up with new software applications due to the high investments in R&D. Nokia with 50.058 billion euros of sales in 2007 had spent 5.2 billion euros in R&D² and is already developing smart phones software applications to guide people inside buildings, avoid traffic jams and sense their own location anywhere³. Although, due to the HOLOS Mobile customization phase, telecom suppliers are not seen as possible direct competitors.

Even if, there are not yet competitors in the HOLOS Mobile commercialization, I consider that exist firms from three different industry sectors that could be interested in developing unique software like this one.

Software services providers are the most threatening companies. The more relevant ones that directly compete with HOLOS in other business areas are: Novabase,

¹ The ACP Mobile is also under the customization phase and would be available to ACP associates after the first trimester of the current year 2009. This application offers: free calls between ACP Mobile users, digital location of any ACP partner (specific points of interest), traffic status in the main Portuguese routes, car localization when assistance is needed, among others.

² According to the 2008 EU Industrial R&D Investment Scoreboard that reports the major investments done in R&D by two thousand both EU and non-EU companies from several industrial sectors.

³ Source: <http://www.nokia.com/technology/upcoming-innovations>

Critical Software, WeDo Technologies, Logica, Link Consulting, and Glintt. These companies have the know-how to dematerialize information (essential to develop HOLOS Mobile), experience in developing innovative and pioneering software, and several clients in the banking, insurance, and mobile communication sectors. They also possess a greater number of resources, much higher revenues and invest a lot more in R&D, when compared to HOLOS operational and financial structure (**Annex 9**).

The second group is composed by mobile operators, who are becoming more and more interested to increase its Average Return per User (ARPU)¹ (**Annex 10**). One way to do it is by promoting the use of internet near its customers. However, these companies core business is not commercializing customized software and they do not possess the capabilities to develop software with these characteristics, even if they invest a lot in R&D. So, the only possible threat is if they form a partnership with the companies enumerated in the first group, following the same business structure used by HOLOS with PT that covers TMN clients. Once there are two other mobile operators (Vodafone and Optimus) free in the market is probable that similar applications appear, if HOLOS Mobile succeeds. The first most evident threat comes from a possible partnership between WeDo Technologies and Optimus that are companies belonging to the same business group – SONAE, SGPS. Another evident threat is Link Consulting's experience in developing internet and mobile solutions for the banking and telecommunication operators sectors.

The third sector encloses whole companies that provide mobile marketing tools to its customers. Some of the most relevant companies in the Portuguese mobile marketing sector are: MKTM², Movensis and Send It. Each of these firms' major strength is the advanced system able to recognize its customers' behavior and match it with the right campaigns. However, the products offered by these companies are still very dependent from SMS technology to be efficiency. That is why the HOLOS Mobile, (**Annex 5**) that georeferentiates every player location in a Google Map, would revolutionize the set of products that are currently offered in this area (**Annex 11**). Companies with a great number of collaborators are both mobile marketing firms'³ and

¹ This indicator is calculated "by dividing the aggregate amount of revenues by the total number of users who provide that revenue" and "it is a powerful and extremely useful indicator of just how well a telecom company is accessing its customers' revenue potential" (www.wisageek.com).

² Tim W.E.'s new agency.

³ Mobile marketing firms' target clients are not only companies with a big number of collaborators but every single big company willing to promote a product, increase brand awareness, begin a contest, etc.

HOLOS' target clients. These firms main objective is to provide a service to increase its clients' brand awareness through promotional campaigns. Therefore, HOLOS should be aware of the interest that this tool may arise among them and the possible investment that they could do to develop a similar application. Still, these players cannot be identified as direct competitors, once there are two main differences between HOLOS' business strategy and the one adopt it by them.

The first big difference is the lack of knowledge they have in “dematerializing information” and developing software oriented to its clients' business needs. Even if they could have an R&D department focused in developing software to improve its business strengths, its core business is not focused in this activity and the investments done in this area are surely not as much as those made by HOLOS.

The second difference is that HOLOS Mobile offers a set of functionalities that could be used by “shop owners” as direct mobile marketing tools. This makes it possible to any firm (and not only big companies) to start using this new approach to promote its business, not being necessary to contact mobile marketing firms. However, it is important to refer that HOLOS Mobile campaigns will probably not be as effective as the ones promoted by mobile marketing firms, once who makes the campaigns are the “shop owners” and not a specialized marketing firm.

If companies from the three groups mentioned above notice that the investment in R&D is worthy, it would be a matter of time for them to develop similar software and start competing with HOLOS' application (mainly for those in the first sector). Once again and benefiting from a first mover advantage HOLOS should try during this time, to gather the biggest number of clients it could before a similar tool will be offered.

7. Internal Scanning

The internal scanning is useful to help HOLOS to reinforce their competences and resources and advice them in the positioning advantages they should explore in the national market. As, the service studied is a unique one and has not yet been implemented in the market it would be difficult to evaluate its performance and possible technical changes to make.

HOLOS is in the right path to reinforce its market positioning, as in 2008 it has doubled its revenues, increase in 30% the number of employees, achieved an EBITDA

of 14%, establish the first international office, and announced new business departments¹ to the entire company. Due to this growth the administration decided to design a new strategic plan where new departmental and individual objectives were communicated aligned with the company's recent strategic objectives.

Since the beginning that HOLOS founders have created innovative solutions with the most diversified functionalities. Currently, HOLOS offers several products² and services³ for companies from different areas⁴.

For the development of these products/services, HOLOS profits from synergies among all them. The use of a particular technology that allows the “dematerialization of information” is used in almost every solution⁵. It is this efficient dematerialization that makes it possible to offer HOLOS' clients the best solutions to its needs, making it one major source of differentiation and competitive advantage. The value that HOLOS creates is based in the investigation and innovative procedures used, as well as, the simplification of their systems. As, Hélder Silva, one of the administrators said: “we pretend that our easy handling systems will be explored intuitively and used as a faster application to achieve superior results by our customers.”

HOLOS other sources of competitive advantage are employees' high education level and its headquarters location⁶. The company benefits from having 9% of employees with a PhD degree, other 9% preparing their thesis of dissertation, and also 15% with a Master degree. From the other 67% the majority have an undergraduate degree in engineering.

As, Pedro Sousa the actual President of the Board of Directors mentioned: “University is the only place that does not get old” and with the continuous flux of knowledge that pass by, HOLOS administration members share students ideas to create viable solutions to its business. The PhD members also have the possibility to be in direct contact with university students and attract the best talented ones to work in

¹ During 2008 were created the departments of Quality Management, Commercial Activity, and Financial Administration.

² Project manager, Google Search Appliance, holDOC, Hermes, HOLOS Mobile, HOLOS Portals, etc.

³ Georeference solutions, multimedia products development, computer networks, search engines based in Google technology, data warehouse and data mining, etc.

⁴ Industrial; Banking; Insurances; Criminal Investigation; Media; Technological Investigation and Development and Public Organisms.

⁵ During the HOLOS Mobile customization process for BES, the information about bank counters, promotional campaigns, discounts, etc. was all digitalized.

⁶ In the Technological Pole of Innovation Companies, inside the University Campus of Science and Technology of Lisbon's Universidade Nova.

HOLOS. This opportunity together with the partnerships established between HOLOS and the Mechanical and Informatics engineers departments are essential to be in constant growth and improve its innovative, creative, and technologic competences.

Following the tendency to become one of the most innovative company's in the market, some modifications will be done in order to enhance innovation capabilities among employees. A site for ideas registration would be created for each employee record their own ideas during the year. The whole list of ideas would be then submitted to the Management Board approval and the employee that proposed the best feasible idea would be rewarded. This new measure tends to reverse the common approach where the main and most valuable solutions often emerge from top to bottom. A new system of evaluation is being also created, where employees' innovation capabilities would be given primary importance.

In the software services industry, HOLOS reputation is still very low. For that reason HOLOS had always made an effort to attract new partners to increase its business credibility. The company develops valuable partnerships at two different levels that add value to its solutions and reinforce its competences.

The first one is at technologic level, where HOLOS could benefit from partners know-how in different areas to develop and innovate its solutions (**Annex 3**). HOLOS also uses its partners' knowledge to complement its offers increasing customer's satisfaction, credibility, and brand awareness.

The second level is to establish partnerships to improve its commercial activity efficiency. Currently, the only commercial responsible is José Armando Silva and two new trainees. The HOLOS Mobile promotional campaigns are done through direct contact between José Armando Silva and companies with the specific requirements¹ (**Annex 4**). Although an agent's web is being built, to help in the HOLOS Mobile promotion. A partnership between HOLOS and *Portugal Telecom* (PT) is being launched where the HOLOS Mobile will be included in PT's products. HOLOS can then focus its core business in the research and development of new products/services and profit from its partner's sales force expertise and larger client's network to achieve better results. Due to this application characteristics PT group's revenues will indirectly

¹ Those who have a considered number of collaborators and operate in the different industries identified in **Annex 4**.

increase, once it will stimulate the use of internet by mobile phones (*TMN* clients) and PCs (*MEO* clients) users, rising at the same time data traffic.

These two levels of partnerships that HOLOS has been developing along the years are essential to increase HOLOS competitiveness and improve its activities performance. An efficient way to develop accurately each of these levels should be the participation in a trade fair¹ where partners can be easily found to answer to HOLOS' specific requirements. However, HOLOS should be aware that in these fairs possible copying threats may appear if competitors are present.

The sharing of financial risk was also relevant for HOLOS growth in this last year. The participation of InovCapital in HOLOS' capital structure was essential to achieve financial sustainability and consequently to expand its business overseas.

HOLOS' suppliers bargaining power is very low. The only contact that exists is when new informatics material is needed not being relevant to establish commercial agreements with them. There is still one major agreement between HOLOS and *Portugal Telecom* for the data storage used in the HOLOS Mobile customization for each client. HOLOS believes it is more secure to send all this data to an external datacenter that provides the appropriate safety measures against possible natural catastrophes and other possible threats.

Until now HOLOS administration did not find necessary to become certified. Nevertheless, the new quality management department is now formalizing the whole organization's processes, to take advantage of synergies that will increase company's competitiveness and reputation in the market. The priority for this year is to achieve the quality management certification² that focuses on the delivery and satisfaction of HOLOS' clients. HOLOS should also consider the certification in Investigation and Development³ as a crucial one to increase reputation and credibility near its customers.

In sum, HOLOS main advantages are: the capacity to develop easy handling innovative solutions; the synergies achieved by using the same technology in products development; the several partnerships that were established during the years, especially those with Google and PT, essential for the HOLOS Mobile development; and the

¹ The world's largest and most renowned trade fair of IT and telecommunications – CeBIT – that took place in March 2009 where one of the hot topics was Webciety - a neologism combining the "World Wide Web" with "society" would have been a nice opportunity to present the application to the market.

² ISO 9001:2008

³ ISO 4457:2007

financial sustainability recently reached with InovCapital funding. Still, in order to progress as an inventive company HOLOS should institute some significant procedures inside the company and accomplish the two certifications to increase its reputation in the market.

8. Internationalization Strategy – Angola

a. Entering in Angola

Given the current circumstances that lead HOLOS to become interested in the Angolan market, this study analyses the attractiveness of the banking and insurance sectors for a possible HOLOS Mobile commercialization in the country. There were also some barriers that were identified and essential for HOLOS to overcome, for a successful HOLOS Mobile diffusion. The possibility of others software services providers start operations in Angola is a reality that HOLOS needs to be prepared to face, even if they do not possess a similar product to HOLOS Mobile.

Due to InovCapital, two million euros investment, HOLOS opened the first foreign office in Dubai in January 2009. The company is now considering entering in the Angolan market as, in 2008 and thanks to a security system developed to *Autoridade de Segurança Alimentar e Económica* (ASAE) some Angolan investors came to HOLOS headquarters in order to know more about HOLOS capabilities related to security systems. Negotiations between the two parts are in progress and if successful HOLOS will establish its second foreign office in Angola, still this year. A pre-agreement about the further commercialization of HOLOS Mobile and other HOLOS products was already settled.

A partnership with Angolan local investors is essential to gain location-specific assets, to overcome legal constraints, to attract easier potential clients, to minimize exposure in a risky environment and to increase HOLOS' credibility in this new market.

The same strategy used in Dubai, will be also used in Angola. A new company will be formed named HOLOS Angola, and in order to become financial sustainable and reinforce its market position, 49% of its capital structure will belong to the Angolan investors, while 51% will belong to HOLOS Portugal. The Angolan investors will not have any responsibilities in the company's operations assuming only a pure financial role.

b. Macroeconomic Overview

The Angolan economy has shown great potential these last years. According to the IMF's World Economic Outlook in 2007, the Angolan GDP reached 60.4 billion dollars and the GDP growth rate for 2008 was 15.6%. Due to the world financial crises and decrease in oil prices¹, the projection for 2009 GDP growth rate tends to be 4% against 0.1% GDP growth rate for the Portuguese economy (**Annex 12**). Still, the GDP growth rate could probably increase once Angola has become the oil leader producer in the Sub-Saharan Africa², and integrated the Southern African Development Community (SADC) that forecast the institution of the Free-Trade Zone until the end of 2009.

Even if the Angolan economy is making good progresses the United Nations, Human Development Index ranks Angola in the 162nd position³ where more than two thirds of the Angolan population⁴ still leaves in miserable conditions and the gap between rich and poor is enormous. These indicators show that a technologic tool like HOLOS Mobile could possible face handling difficulties in the poorer society levels.

Being one of the youngest democracies in the world⁵, Angola still have some aspects that investors and companies like HOLOS, who aim to start business in the country, may found inappropriate to their business values. The high levels of corruption that are still seen as an usual way of doing business, the heavy bureaucratic procedures for setting up companies, the lack of qualified workers, and the public services inefficiency, may be the most relevant entry barriers they could face. It will be then essential for HOLOS to have the "right partners"⁶ that help the company surpassing these entry barriers.

If we consider these barriers and analyse the World Bank Doing Business Index 2009⁷, Angola is not an attractive country. However, customs cooperation agreements and bilateral investment treaties were signed between Angola and Portugal, increasing Portuguese investors' protection⁸. For the investors in the Angolan ICT industry the

¹ Price oil fluctuation contributes 60% to the Angolan GDP.

² Nigeria was relegated to second place.

³ Among 177 states

⁴ 12.5 million according to the Angolan embassy.

⁵ After 41 years of colonial and civil wars, Angola achieved political stability in 2002

⁶ The right partners could be those that easily "move around" inside public organizations

⁷ The World Bank Doing Business Index 2009 presents and compares quantitative indicators on business regulations and the protection of property rights. Angola is ranked in 168th place among 181 economies.

⁸ During the visit of the Angolan President José Eduardo dos Santos and after a meeting with our President Aníbal Cavaco Silva both agree that "the relation between both countries is excellent but there is still lot to do". Our President defended the creation of a "true strategic partnership", as for José Eduardo dos Santos assures that "Angola offers a range of opportunities for foreign investors, are opened to receive entrepreneurs that trust in the Angolan government and believe the country future success".

National Commission of Information Technologies published a law that regulates the whole industry, providing the indispensable legal base for companies with HOLOS characteristics¹.

Regarding the strong Portuguese presence in the banking, telecommunication, construction, and tourism sectors, HOLOS could benefit for an easier integration of its business in this new market. Also by having players who operate in Angola and are already familiarized with HOLOS Mobile in the national market² increase changes for this product commercialization.

c. Segments Attractiveness

c1. The Banking Sector

In a study developed by Deloitte Angola, there are currently 1.1 million bank clients in the country, meaning that in 2008, 8.8%³ of the population has a bank account (Annex 13 – A). According to the leading banks CEO's operating in Angola, the banking system is not exposed to international markets fluctuations⁴ and has accumulated healthy capital surplus every year.

In a survey made to 4100 Angolan bank clients and according to Accenture – Angola director Alexandre Muniz, the Angolan banking sector requires more than ever implementation of differentiation measures⁵. Since the beginning of this century there were already ten banks that started operations in Angola (Annex 13 – B) increasing competition and customers needs. The customer service has become a fundamental concern for national and foreign banks that operate in the country. The majority of banks assume that agencies are still the key element used in the relationship establish with customers. However, there are other distribution channels like, ATM, Internet Banking, Mobile Banking, and E-Mail that are being used to increase customer service and free agencies to take care of higher value added activities⁶ (Annex 13 – C).

The primary bank targets for the presentation of HOLOS Mobile given the number of clients, volume of clients' deposits, and the participation of influential

¹ Source: <http://www.padoca.org/pag/Docs/anteprojecto.pdf>

² PT and BES are some of those companies that have businesses also in Angola.

³ This value was calculated, dividing 1.1 million by 12.5 million.

⁴ As banks do not obtain funding in the international market and they do not invest in risky products like those that have lost value due to the financial crises (Source: *Visão Magazine* nº 836 March 2009).

⁵ Source: http://angola.lpm.com.pt/index.php?option=com_content&task=view&id=2338&Itemid=2

⁶ Source: Deloitte and ABANC – *Banca em Análise* Angola 2008

companies in its capital structure are *Banco Africano de Investimentos* (BAI), *Banco Poupança e Crédito* (BPC), *Banco Fomento Angola* (BFA), *Banco BIC Angola*, and *Banco Espírito Santo Angola* (BESA) (**Annex 13 – D**). The remaining banks presented in the annex are also relevant as potential clients and are also strongly investing in customer service improvement to grow and attract new clients.

In my opinion both BESA and BFA should be given priority in the HOLOS Mobile presentation given its distinctive interests.

Since BESA belongs to BES Group and this Group is the only HOLOS Mobile client in the domestic market, the opportunity for HOLOS business expansion is a reality. As, HOLOS Mobile customization phase for BES Group is occurring probably an upgrade could be further done including Angolan points of interest. This upgrade would save time and money once its strategy was already defined for the Portuguese market and synergies may emerge.

As for BFA, once 49% of its social capital belongs to the main Angolan mobile operator (UNITEL), there is a major opportunity why this bank should be interested in acquiring the HOLOS Mobile. From one side we have BFA willing to improve its customers' service and attract more customers. In the other side we have UNITEL, who would benefit from BFA's customers use of internet through the application and would significantly increase its ARPU.

Given this scenario the commercialization of HOLOS Mobile in the banking sector could both improve banks' customer service and create opportunities for HOLOS business diffusion.

c2. The Insurance Sector

When compared to Portugal the number of insurers that exist in Angola and the development level of the market is still very immature. Shortly after independence¹ the insurance industry was nationalized and *Empresa Nacional de Seguros e Resseguros de Angola* (ENSA) became the only insurance company in the market. In 2000 a new insurance law passed, which liberalised the insurance market². Five additional insurers have entered the market but only obtained its licenses in 2005 and 2006. Currently the competitive environment remains buoyant as companies focus on building an

¹ in November of 1975

² Source: Global Credit Rating Co. – Angola Insurance Credit Rating Report

underwriting base in a fast growing market². The three biggest companies are: ENSA that focus on government funded projects; *Angola Agora e Amanhã – Seguros* (AAA) that focus on oil business; and Global Alliance (GA) that offers individual (health care and motor insurances among others) and corporate insurances and is the only foreign insurance company effective in Angola².

HOLOS could present the HOLOS Mobile to the three main insurers specified above, even if, this sector is not as attractive as the banking sector due to the earlier development stage. Therefore, insurers are not yet concerned in offering differentiated products, like the HOLOS Mobile, to their customers. Small insurers like *Mundial Seguros*, NOSSA, and *Fénix* are still in the initial phase of activity and the number of customers should not compensate the investment in this sort of application.

d. HOLOS Mobile Commercialization Main Barriers

The first broad barrier that HOLOS may face is the lower internet literacy among the Angolan society. Comparing to the industrialized countries Angolans median age is around 18 years old¹. However, the openness to new technologies, in particular internet, that tends to be higher near the young generations is very small in Angola. According to Miniwatts Marketing Group's study², there are less than 500,000 internet users in Angola. This lack of internet users is an evident barrier to the acceptance of an application with HOLOS Mobile features, where several society levels will have handling difficulties.

There are also three particular barriers that HOLOS should consider and if possible overcome for a successful HOLOS Mobile commercialization.

The first and most concerning one is the inexistence of Luanda's Google map and complex urbanization scheme. The Angolan territory is not represented in Google map technology. Even if we can obtain a satellite view of Angola's capital area, using Google Earth technology, we cannot see any of Luanda's streets name. This functionality is crucial for HOLOS Mobile reliability, and important to correctly georeferenciate any point of interest. When Pedro Sousa was confronted with my concern he said: "If there are no maps, it would be up to us³ to write Luanda's main street names in our clients' application, or at least identify points of interest

¹ <https://www.cia.gov/library/publications/the-world-factbook/geos/ao.html>

² <http://www.internetworldstats.com/af/ao.htm>

³ HOLOS technicians

coordinates”. To overcome this barrier HOLOS should invest a certain amount of money to create Luanda’s Google map. This requires car travels by Luanda in order to get the streets name and then scan that information into specific software that will create the map. HOLOS should be aware that probably this Google map will be available for everyone and that a competitor will not have to incur in this cost to offer a similar product. So, in order to avoid this, HOLOS should negotiate with Google who will incur the cost (if Google, if HOLOS) and who will have access to the map.

However, there is also another aspect that HOLOS members should bear in mind when presenting the HOLOS Mobile to its potential clients. Luanda that was projected for 500 thousands habitants now accommodates more than 3 million¹. The complex urbanization scheme together with the amount of new buildings and neighbourhoods that are arising in Luanda every year shall aware HOLOS for the HOLOS Mobile updating costs. Every time significant changes occur in Luanda’s urbanization scheme, HOLOS should update Google maps. Customization costs should be also relevant for HOLOS decisions, during the negotiation processes. As, clients may say they want to include 500 points of interest, but due to the constant arise of commercial establishments² they may decide to include more during the customization phase.

The second major barrier is mobile operators’ 3G network cover. Angola has two mobile operators. The market leader UNITEL³ has 4.5 million clients and operates since 2001. Presently, UNITEL covers Luanda’s province with 3G services. In last December, UNITEL expanded 3G network to main roads and cities of Benguela, Lobito, Huambo and Lubango. It is important to remember that the HOLOS Mobile application can only be used in 3G mobile devices and according to UNITEL there are already 700 thousand clients that possess them. The other mobile operator that exists is MOVICEL and has 2.5 million clients. Currently, it only covers Angolan capital with 3G services. This barrier is the easier one to surpass. Once Luanda is the only Angolan city that is fully covered by UNITEL and MOVICEL 3G services, HOLOS should only customize the HOLOS Mobile with Luanda’s points of interest.

¹ Source: Angolan embassy

² In 2008 there were 4,180 new commercial stores licensed and the trade sector was considered as one of the most vigorous sectors in the Angolan economy (http://angola.lpm.com.pt/index.php?option=com_content&task=view&id=1924&Itemid=2).

³ Has as main stockholders SONANGOL (25%), *Portugal Telecom* (25%), and Isabel dos Santos business group (SPF)

The last identified barrier is its lower recognition in the national market which will probably affect its capability to attract customers also in this new environment. It will be crucial for HOLOS to drag and expand its current technologic partnerships (Google, SAS, Oracle, etc.) into the Angolan market.

Therefore, once Angolans are more comfortable to mobile phone devices¹ than computer devices, the HOLOS Mobile may not face a rough acceptance as it seems. HOLOS would be also responsible for the proliferation of internet in the Angolan society and would help “shop owners” to promote its products/services, creating new opportunities for a better relation with their clients.

e. Rivalry Threat

As it was said before, the banking sector is in constant growth, consequently searching for innovative processes to improve its services and operational performances. The construction and tourism sectors are also facing great levels of development and are willing to modernize its offers and improve its active systems². As for, the mobile operators there is still enough space for growing and captive new clients. So, the offers of differentiated products/services, together with, software services providers’ solutions are fundamental for the development of all these sectors and several others in an emergent country, like Angola.

The existence of several Portuguese companies operating in Angolan industries is considered a major advantage for Portuguese software services providers. Even if there are no direct competitors to HOLOS Mobile application commercialization, Portuguese software services providers are strongly entering in Angola where the appetite for ICT solutions is enormous.

Most often, software services providers choose countries to expand its business, where some of its clients are already present. Relative to those six companies identified in the national market, as potential direct competitors in the HOLOS Mobile commercialization (**Annex 9**), one of them (Glintt) is already present in Angola. Novabase, Critical Software, and Link Consulting have previously developed some projects for Angolan clients and seem to be the most propitious companies to enter the market in a short term period. These companies have learnt about Angolan clients needs

¹ according to Central Intelligence Agency in 2007 there were 3.3 million mobile phones subscribers in Angola (<https://www.cia.gov/library/publications/the-world-factbook/geos/ao.html#Comm>)

² Source: *Visão* Magazine nº 836 March 2009

while developing those projects and their solutions' reliability are already known in the market.

HOLOS that will enter in the market by establishing a direct partnership with Angolan investors may face some difficulties to attract clients once their solutions' reliability are not known. Still, the company has achieved some experience while expanding its operations in the Middle East market and would benefit from its investors contacts to pull towards them new business opportunities.

9. Implementation plan

Luanda being the Angolan capital, where identified target clients have their headquarters is seen as the most appropriate place to create a company with HOLOS solutions characteristics.

Being near its customers offices will create a cost advantage for implementation, support, and maintenance activities. HOLOS should follow the same strategy used in Portugal and Dubai by establishing the company's office in the university pole of Luanda. This would beneficiate HOLOS to be in constant contact with students that could be attracted to participate in the company's projects and even the possibility to form partnership with the Informatics and Engineering faculties improving its innovative capacity.

The only public university in Angola (*Universidade Agostinho Neto*) is spread by ten Angolan provinces having an Engineering Faculty only in Luanda. However, there is a project for the construction of a new University Pole in the city (*Cidade Universitária de Luanda*) that is planned to be concluded in 2010 and will become the country's main academic center. If HOLOS will not be able to find an office in the actual University Pole, it should rent a provisory office in Luanda to start operations and then move to the new university pole. A normal office with 100 square feet will cost between 3400 and 4800 Euros per month in Luanda.

If negotiations succeed between HOLOS Portugal and the Angolan investors', two teams shall be formed. The first one¹ will work on the implementation project and HOLOS will not incur in extra costs. The second team² would take responsibility on HOLOS Angola activities, during the following years and would be paid according to

¹ composed by 15 HOLOS elements

² formed by one commercial director and two technicians

Table A¹. The commercial director benefits include private car and chauffer that are needed to ensure its safety in this adverse country.

Table A – HOLOS Angola team monthly salaries

Position	Monthly Salary + Benefits
Commercial Director	3.700€ + 1.500€
Software Technician 1	2.500€
Software Technician 2	2.500€
Total Monthly Salaries	10.200€

According to the Angolan law to enhance the national workforce, 70% of the members of a company board must be Angolans². Due to the high life cost in Luanda, it would be extremely expensive to send HOLOS own resources to work there in a long term perspective. So, HOLOS should employ local workers or try to find some Angolans leaving in Portugal that may want to return to their country. Profiting from being in direct contact with informatics students, Pedro Sousa has already identified some potential Angolan students³ that may be attracted to go to Angola. If using these students ability to form the team that will ensure HOLOS Angola operations, HOLOS could start training them in Portugal and save some money in the travels that will need to be made if using local resources. This team will be responsible for all business activities except R&D (**Annex 1**), that in a first phase should be still managed in Portugal due to HOLOS Portugal competences and experience.

During the implementation project development several travels⁴ to Angola should be made by Pedro Sousa and two or three technicians that will be working on it. According to Pedro Sousa each trip will last one week and cost around 20.000 Euros. The objective is to start training HOLOS best business practices, explain products functionalities to the local team⁵, and identify potential clients' needs. A study about the primary conditions⁶ to start operations should be also elaborated during these travels while in direct contact with market conditions.

¹ This table was elaborated based on an interview made to Pedro Sousa

² Source: *Especial Exame Angola* Magazine March 2009

³ That are currently studying in Universidade Nova – Science and Technology Faculty

⁴ This travels should length a week and done once a month, during four months.

⁵ If the team will be formed by local resources.

⁶ Availability of electricity, water, Internet, 3G signal coverage, etc.

Table B – HOLOS Angola team Training Costs

Training	Cost
1 travel = 1 week (Supervisor + 2 technicians all included)	20.000€
If local resources are used, 4 travels are needed. One per month during 4 months	80.000€
If using Angolan students from <i>Universidade Nova</i> . Two travels are needed one per 2 months during 4 months + initial training given in Portugal	40.000€ + 1.000€
Total Training Costs	41.000€ or 80.000€

The common language used in Portugal and Angola, simultaneously with HOLOS members' knowledge about the Angolan culture will be very useful to avoid constant travels to the country, once every solution can be directly sent through internet. The HOLOS Mobile application was entirely developed in Portuguese. So, no adaptations are needed to be done for the Angolan market, depending entirely on the client's own strategy. Considering the business exercised by HOLOS, the only goods required to start operations are computers, tables, and chairs.

After starting operations HOLOS should contact individually each company from the identified sectors to present the HOLOS Mobile application and others HOLOS' applications. The participation in FILDA - *Feira Internacional de Luanda*¹ could also be helpful to promote its original application, together with other products. New business opportunities would probably arise due to the participation of several Angolan and foreign economic players, specially the participation of Angolan banks and insurers².

Due to investors' private contacts in Benguela, this region could be of extremely interest to expand further HOLOS businesses. The region is actually seen as the one with greater potential for tourist attraction investments. Using those connections and given HOLOS Mobile features, HOLOS could achieve a competitive advantage if further offering the application to the Angolan tourist sector.

In table C, I grouped the main costs that HOLOS would incur in a first instance if entering in the Angolan market.

¹ FILDA will take place from 14th until 19th of July 2009 (deadline for inscription 14th July)

² <http://www.filda-angola.com>

Table C – HOLOS Angola initial activity costs

Activity	Cost
Office rent in Luanda with 100 m2 (per month)	3400€ - 4800€
Local Equipment (3 computers and others)	6.000 €
Team salaries (per month)	10.200 €
2 or 4 Training sessions (plane tickets included)	41.000€ / 80.000€
Participation in FILDA	1.400 €
Luanda's Google map update	Not available
Gas/water/electricity	Not available
Total cost	62.000€ - 102.400€

If we consider that the HOLOS Mobile could be sold for 600.000€ in Portugal it is more than obvious that if HOLOS could find a single HOLOS Mobile client in Angola it's enter in the market will be worthy, even if Google map update cost and current expenses are not included.

In order for HOLOS to follow the right strategy while entering in the Angolan market, I elaborate a timeline table and a Balanced Scorecard that will help HOLOS Board to realize primary activities and accomplish the initial objectives within 2 years.

HOLOS Timeline Activities

Timeline (activities / months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19 - 28	29	30	31	32	33	34	35	36
1 - Project implementation developed by HOLOS Portugal team																											
2 - Paperwork for HOLOS Angola creation																											
3 - Expand HOLOS technologic partnerships to Angola																											
4 - Recruitment of HOLOS Angola team																											
5 - Search for an office in Luanda																											
6 - Training given to HOLOS Angola team																											
7 - Formulate strategic objectives for HOLOS Angola																											
A - Beginning of HOLOS Angola operations																											
8 - Presentation of HOLOS solutions to potential clients																											
9 - Update Luanda's Google map (write main streets name)																											
B - Obtain HOLOS first client																											
C - Obtain HOLOS Mobile first client																											
10 - Participation in FILDA during the 1st year of activity if needed																											
D - Achieve positive results in first year																											
11 - Move from provisory office to new University Pole																											
E - Achieve 2M€ of sales																											
12 - Presentation of HOLOS Mobile to the tourist sector																											
F - Find first client in Benguela																											

Note: The first year of activity ends on the 18th month
The second year of activity ends on the 30th month

1, 2, 3, ... - Activities
A, B, C, ... - Milestones

HOLOS Balanced Scorecard

Strategic Theme	Objectives	Measurements	Target	Initiative
Financial	<ul style="list-style-type: none"> • Increase Sales • Increase Profitability 	<ul style="list-style-type: none"> • Sales Revenue; • Sales Volume. 	<ol style="list-style-type: none"> 1. Achieve positive results in the 1st operational year. 2. 2M€ of sales in the end of the 2nd operational year. 	
Customer	<ul style="list-style-type: none"> • Create awareness about HOLOS competences among potential clients • Provide HOLOS Mobile to at least one bank at the end of 1st year 	<ul style="list-style-type: none"> • Questionnaires made to potential clients; • Number of visitors to HOLOS counter in FILDA. 	<ol style="list-style-type: none"> 1. Present HOLOS solutions to potential customers; 2. Presentation of HOLOS Mobile to main banks and insurers operating in Angola. 	<ul style="list-style-type: none"> • Participation in FILDA; • Direct contact with banks and insurers.
Internal	<ul style="list-style-type: none"> • Train HOLOS Angola team • Expand HOLOS current partnerships to Angola • Search to move the office towards the new University Pole of Luanda • Obtain ISO certifications • Update Luanda's Google Map 	<ul style="list-style-type: none"> • Number of travels done from HOLOS Portugal team to Angola; • Number of processes changed or created to obtain ISO certifications; • Time spent in writing Luanda's main streets name. 	<ol style="list-style-type: none"> 1. Start activity in Angola after 6 months the negotiations are closed; 2. Establish HOLOS Angola office in the new University Pole of Luanda after works conclude; 3. Have Luanda's main streets name in Google map tech at the end of 4 months 	<ul style="list-style-type: none"> • Efficient allocation of financial and human resources; • Contact HOLOS current partners; • Contact on time the new University Pole of Luanda; • Car travels by Luanda in order to get the streets name and then scan that information into specific software.
Learning	<ul style="list-style-type: none"> • Anticipate customers needs and create solutions that answer to their demands • HOLOS Mobile Customization learning • Expand HOLOS Mobile functionalities 	<ul style="list-style-type: none"> • Time until develop first product for the Angolan market; • Time to customize HOLOS Mobile for a client 	<ol style="list-style-type: none"> 1. Create a new solution based on Angolan customers specific needs 2. Add new features to HOLOS Mobile application 	<ul style="list-style-type: none"> • Identify Angolan clients specific needs; • Questionnaire to potential clients to know what features they value most in HOLOS Mobile application.

Conclusion

Thanks to the partnership established with Google, HOLOS was able to develop the HOLOS Mobile application. This pioneering worldwide tool is presently being customized to BES, which is the first and only client that acquired the software. So far, it is still impossible to analyse its functional performance and the acceptance level that will obtain in our society. However, HOLOS competitive advantage is not assured since similar products will probably be offered if HOLOS Mobile becomes successful.

The financial sustainability that HOLOS achieved with InovCapital participation in its capital structure brought new business opportunities for the company's expansion overseas. The latest entrance in Dubai provided HOLOS' Board some experience in how they should expand its competences to new market conditions. An opportunity emerged also this year, for HOLOS expansion to the Angolan market where the demand for ITC solutions is increasing.

A study about HOLOS Mobile potential to be commercialized in Angola was realized. The banking sector was identified as the most attractive one to present this original product, due to the strong Portuguese presence and the desire to offer differentiated products to attract new clients. The two main banks identified which should be contacted first about HOLOS' new application are BESA and BFA. The insurance sector is less developed than the banking sector and insurers are not yet interested in offering differentiated products. However, there were three major insurers that were identified as potential clients.

Therefore, for a successful commercialization of the application HOLOS should overcome three key barriers that were identified. First it should update Luanda's Google Map. Second it should customize the HOLOS Mobile only with Luanda's points of interest, once is the only city that is fully covered by MOVICEL and UNITEL 3G services. The last one consists in expanding its current technologic partnerships to the Angolan market, in order to increase its reputation near potential clients.

Regarding the low internet literacy and the handling difficulties that may appear with HOLOS Mobile usage, HOLOS should implement the lessons learned in Portugal and Dubai into the Angolan market. This will be extremely useful for a better and more efficiency diffusion of HOLOS Mobile near the Angolan society.

Annex 1 – HOLOS Value Chain



Innovation Procedures
Human Resource Management
Quality Management
Financial & Administrative Management
Communication & Education

1. The R&D activity is done by several teams on the different areas where HOLOS operates. Any employee of the company can suggest an idea for the development of a product but they can only go further after administration approval. A team is assign and the conception and development of the product begins.
2. This activity basically communicates to HOLOS clients and the market as a whole, what products are prepared to be commercialized. Product/services functionalities are explained.
3. Formal proposal and negotiation process occurs between clients and HOLOS sales team. In this stage also specific features of the product are explained to possible clients.
4. The product/service is implemented accordingly to the client's needs and demands (custom made implementation).
5. After-sales support given in order to prevent possible problems that could occur on the product use. It includes also a set of preventive services, in order to anticipate potential application problems (that may arise from a change in legislation, for instance) or to anticipate new client needs.
6. Maintenance of the product and correction of errors that the software could have. Sometimes up-grades needed to be done.

The supporting activities are critical as for the development and quality guarantee of the product/service as for the relation established between the firm and the stakeholders.

Communication and Education: activity responsible for managing all issues concerning HOLOS internal and external communication, as well as organizing “cultural” events in order to promote HOLOS values with the stakeholders (such as team building activities, visits to the theatre, sport events, etc.)

Innovation: HOLOS has a multidisciplinary team dedicated to analysing all innovation opportunities it faces and that arise either from markets needs or from HOLOS team suggestions;

Human resources management: HOLOS recognizes that its greater source of potential is its Human resources, so a set of procedures were implemented in order to assure: (i) its

satisfaction; (ii) that the skills are adequate to the job; (iii) that the professional profile is adequate to HOLOS' needs; (iv) career progression opportunities; (v) that everyone has a set of goals that meet the company's strategic goals.

Quality management: implementation and management of the company's quality management system. HOLOS follows closely the Deming Cycle in order to keep it up to date to the organization mission, vision, values and strategic goals from a continuous improvement point of view.

Financial and Administrative: responsible by managing all financial and administrative issues, regarding the organization relations with stakeholders. It coordinates the company's purchases processes, as well as payments and receivables.

Annex 2 – HOLOS Revenues 2005 - 2008

Year	2005	2006	2007	2008
Revenues (€)	546.385,79	788.694,41	783.617,52	1.900.000*

* Last year's revenues are still not known but are foreseen to be around 2 Million Euros due to the several changes that HOLOS suffered (entry in Dubai, InovContato participation in the capital structure, new products sales, etc.)

Annex 3 – HOLOS Partners

SAS Institute Portugal – carried out in projects involving the construction of Data Warehouse and Data Mining Systems making it possible for customers to have an immediate reply to the constant changes in business conditions

Via Net.Works – enables HOLOS to offer its customers the most innovative technologies, in the Internet field, creating added value services

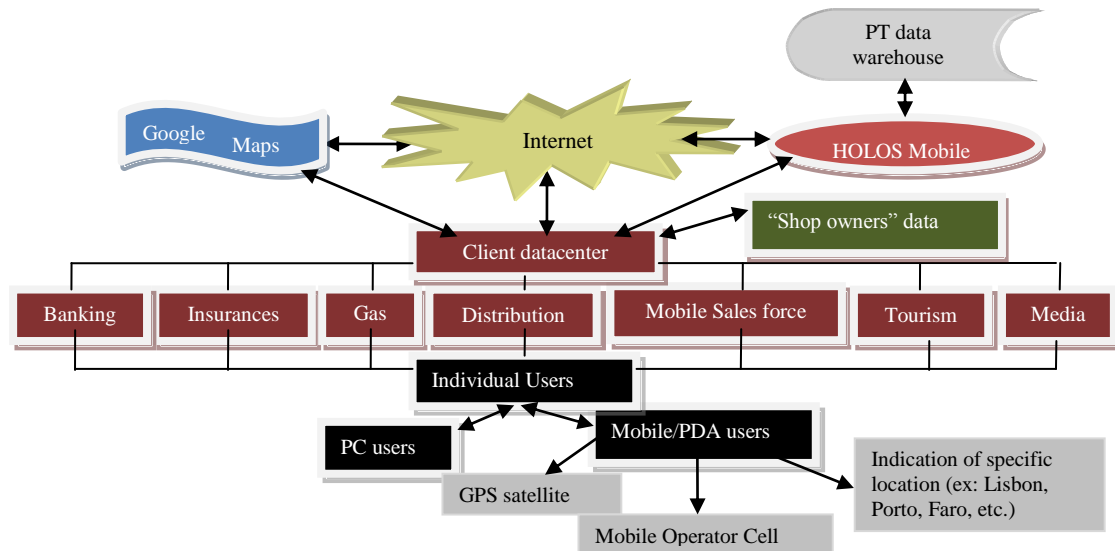
KPN Qwest/Novis – complement HOLOS solutions regarding communication networks, namely optical fibre networks and other IP technology related services

Oracle – the services developed by HOLOS with Oracle technology include the development and the implementation of structural solutions, of storage and of information display, using Oracle database management systems

Brandia/NovoDesign – this partnership is useful for the development of "Internet" projects

Google – since June 2006 HOLOS joined the "Google Enterprise Professional's program", allowing it to provide Google Technology Solutions. Thanks to this partnership HOLOS could develop the HOLOS Mobile application where Google Maps/Google Earth is of crucial use to distinguish HOLOS' software from others in the market.

Annex 3 – HOLOS Mobile Industry Map



Annex 5 – HOLOS Mobile Other Additional Features

This software application will enable:

- the access to information using a new method (PC/mobile phone/PDA) instead of using the so common “discount books”;
- access to individual environmental information in real time in Google maps/Google Earth technology;
- friendly interface platform
- check the closest points of interest related to the actual position; or check points of interest from current location (ex: Porto) in a possible future location (ex: Faro);
- It can be install in all mobile phones that use a Java Virtual Machine platform but not in iPhones.
- HOLOS’ clients that acquire the HOLOS Mobile software and its “shop owners” (restaurants, all kind of stores, gas stations, etc.) will have the possibility to select and send an invitation-multimedia message via SMS, Email, Voice mail, etc. (Ex: A restaurant in a given location is with few customers during lunch time. He can then send a SMS to every person that is in the area (for example in a 5Kms ray) and has the HOLOS Mobile, offering 35% discount in daily menus and a free drink);
- The individual customers can define their profile by selecting their preferences according to preferred stores, price, number of daily messages received, etc.

Annex 6 – Example: SAAS – How Economies of Scale Can be Achieved (estimated values)

- | | |
|------------------------|-------|
| 1. Customization cost | 1000€ |
| 2. Fixed cost per user | 2€ |
| 3. Number of users | |

a. $1000\text{users} * 2\text{€} + 1000\text{€} = 3000\text{€}$ Final cost per user = $3000\text{€} / 1000\text{users} = 3\text{€}$

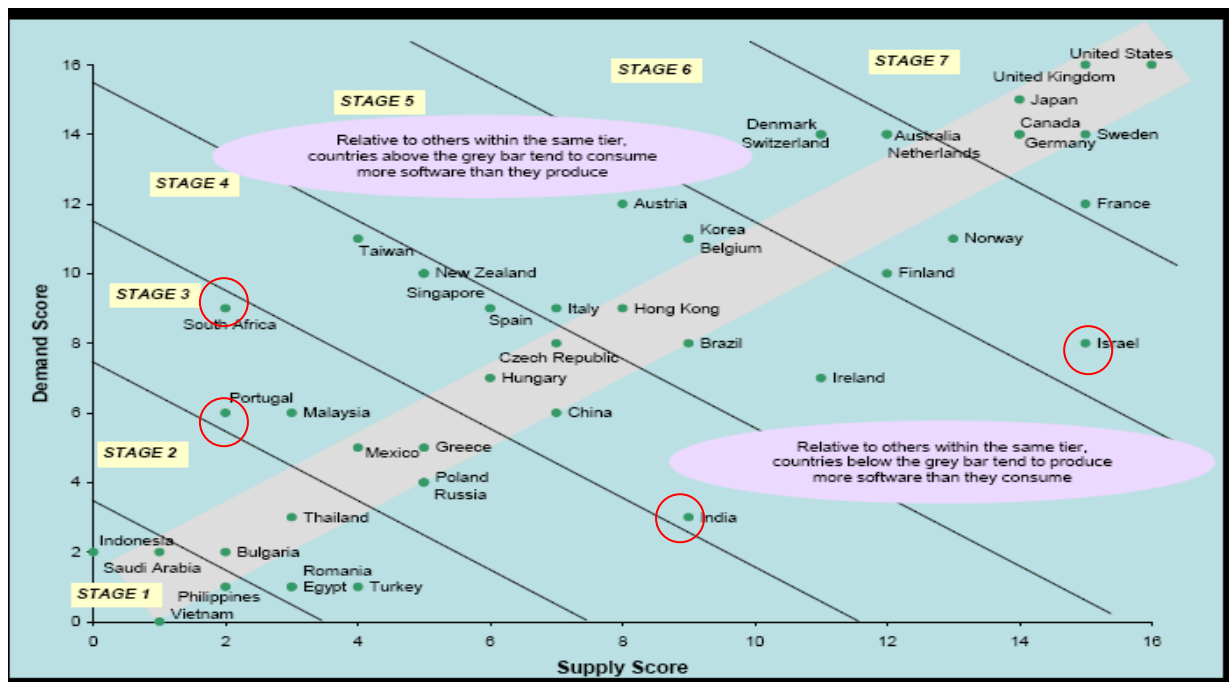
b. $3000\text{users} * 2\text{€} + 1000\text{€} = 7000\text{€}$ Final cost per user = $7000\text{€} / 3000\text{users} = 2.33\text{€}$

Note: The Corporation which acquires the HOLOS Mobile will always have to pay for the service plus an amount for each individual customer that submits the application. The firm may charge or not its clients for the access to the application.

Annex 7 – Example: SAAS – Longer Contracts Cheaper Cost (estimated values)

1. Customization cost 1000€
2. Update Cost + Maintenance cost 100 updates a year each one cost in average 5€ = 500€
3. Contract Length
 - a. 2years * 500€ + 1000€ = 2000€ Yearly cost = 2000€/2 = 1000€
 - b. 3years * 500€ + 1000€ = 2500€ Yearly cost = 2500€/3 = 833.33€

Annex 8 – Countries Demand and Supply of Software



Source: http://takeoff.ideias3.com/2007/apresentacoes/ideias_e_software.pdf

Note: Here we can see that the Portugal market has a greater demand for software than its actual production. The South African market that is actually nearer the Angolan market has a greater demand for software than the Portuguese so it is not considered a threat for Portuguese companies. Two possible markets that could export software to Angola are both the Indian and Israeli companies.

Annex 9 – Software Services Providers

The only Portuguese software company that is present in the 2008 EU Industrial R&D Investment scoreboard is **Novabase**. Currently providing solutions in the telecom industry

Novabase achieved sales of 262 million euros and spent 570 thousand euros in R&D¹. The company has also accomplished some cases of success when providing services to CGD, Millenium BCP, BES and BNP. Novabase is the biggest employer in the Portuguese IT industry with 1700 workers and is currently initiating operations in Angola giving priority to the banking sector.

Critical Software is also a successful Portuguese company that has been growing since 1998 in the software services industry. The company has also accomplished some cases of success with Angola and Mozambique telecom operators and Vodafone S.A. However, Critical Software does not provide solutions in the banking area. In 2007 have achieved a turnover of 13.7 million euros and invested 10% of it in R&D. Critical Software employs presently 300 workers.

The **WeDo Technologies** is owned by the largest non-financial Portuguese group - SONAE group. This company was founded in 2001 and is already present in five continents providing services in the telecom and insurance industries. Its main clients among others are: Vodafone, Orange, France Telecom, Telefonica, Brasil Telecom, Optimus, etc. Represented worldwide the company has the possibility to participate in several events related to its business and earn several partners to launch new products/services. The company achieved revenues of 31.8 million euros in 2007. Presently, WeDo Technologies has 350 employees around the world.

Edinfor was an EDP subsidiary that in 2005 was acquired by the multinational IT leading group **Logica**. Contrary to the above companies this enterprise operates in Portugal but belongs to a worldwide organization having its headquarters in Reading – UK. The company also operates via Portugal in Angola and gathers a total of 1,000 employees. Its core markets in Portugal are mostly those of electricity, water, telecommunications, and public administration. (“More than 250 operators in over 70 countries including more than half of the world’s digital mobile operators rely on Logica software”). This company is also presented in the 2008 EU Industrial R&D Investment scoreboard having invested 29.54 million euros in R&D and obtained 4,302 million euros of sales in 2007.

Link Consulting was formed in 1999 and counts with the participation of two important organizations in its capital structure INESC and Aitec. The Aitec Group was responsible for the launch of Novabase and others IT companies in the Portuguese market. Link Consulting is currently the group’s biggest company and plays an important role in information systems development and integration. Link Consulting has a vast experience in the supply of internet and mobile channels, based on a tested, comprehensive and flexible solution used by many banking institutions (ex: BES Group, Banco Fomento Angola, Banco BIC, Caixa Geral

¹ http://iri.jrc.ec.europa.eu/research/docs/2008/1_4.pdf

Depósitos, Banco Africano de Investimento, etc.)¹. It also provides solutions to several telecommunications operators (ex: TMN, Portugal Telecom, Optimus, etc.) and has already developed several projects in the Angolan market. Constantly focused in using internet to create new solutions for its clients Link Consulting invested less than 1 million euros in R&D and achieved revenues of €13M, during 2007. Presently it counts with 200 employees.

Glantt – Global Intelligence Technologies is the ancient ParaRede. This company due to its business areas is the one that would be less probable to develop a similar application to HOLOS Mobile. However the strong presence that they have in Angola developing innovative IT solutions for that market should be relevant if HOLOS enter in that market. Currently it has 250 employees and obtained revenues of €58M in 2007.

Annex 10 – Mobile Operators ARPU in 2000 – 2004

Quadro 63 Receita média mensal por cliente (ARPU)

	2000	2001	2002	2003	2004
Receita média mensal por cliente (ARPU)	31,41	29,53	26,42	25,20	25,49
Varição anual	2,9%	-6,0%	-10,5%	-4,6%	1,1%

Unidade: Euros, %.

Fonte: ICP-ANACOM, Relatórios e Contas dos prestadores.

Note: Due to the new promotions that the 3 mobile operators (TMN – Moche; Vodafone – Extreme/Extravaganza; Optimus – Tags) have launch in 2008 offering free calls and SMS (for clients that have the same tariff) if clients pay only 10€/month. ARPU is possible to have decreased being suited nowadays between 15€ and 20€.

Annex 11 – Mobile Marketing Firms Campaigns

MKTM (www.mkt-m.com)

- **Develop and maximize clients' database:**

1 – Clients have to register in the CRM program. After that, they will be receiving the contents of your choice to the database of registered clients (promotions, events, special offers, relevant information about your product/service, etc.).

2 – For mobile coupons, clients have to send a message with the coupon number and then receive a message containing the discount. In the case of mobile vouchers we send the SMS to your client's database with a mobile discount/voucher.

- **Store Locator**

1 – Businesses such as banks, travel companies, real estate portals with multiple stores spread out across the country, can implement store locator service, allowing their customers to easily search for the nearest store or to get informed regarding driving directions to get there.

2 – You should provide us a list with all your stores and we will go to define the area which "belongs" to each store.

Movensis (www.movensis.com)

- **Mobile banking solutions**

1 – Internet banking on web and Wap channels was the first step towards a mobile banking' strategy that is now moving towards sms' based solutions.

¹ www.link.pt

Baring that in mind, Movensis developed a full range of mobile services and applications providing multi-channel access through PDA's, mobile phones, web, etc. Movensis' software for financial services is modular and addresses any challenge concerning mobile payment and mobile banking.

SendIt (www.sendit.pt)

- **Couponing**

1 – Allows a brand to undertake a stratified sending of SMS with a certain discount on any product. The mobile phone of the recipient receives a 2D code and, to claim his discount, the client only has to go to the sale location, to pass the screen of the mobile phone over an infrared reading machine (made available by SendIt) to collect the voucher and delivery it to the cashier to have access to the discount.

- **Usendit**

2 – Application that allows several users to manage independent contact databases and send personalised messages to these contacts at any time, as well as in pre-established schedules.

Annex 12 – GDP Growth Rate and Inflation Rate in Angola and Portugal (2006 – 2009)

GDP Growth rate	2006	2007	2008	2009 Projections done by IMF
Angola	19%	24%	15.6%	4%
Portugal	1.4%	1.9%	0%	0.1%

Source: Visão magazine nº 836 March 2009

Annex 13 – Angolan Banking Sector (*Banca em Análise – Angola 2008 Deloitte and ABANC study*)

A – Banking Sector Evolution (1995 – 2007)

EVOLUÇÃO RECENTE DO SECTOR BANCÁRIO EM ANGOLA						
	1995	2000	2004	2005	2006	2007
Bancos Comerciais	6	8	11	12	15	17
Balcões	N/D	42	160	237	279	318
Municípios						
Bancarizados*	N/D	19	25	29	34	41
ATM	-	-	85	150	289	498
Balcões						
por 100,000 hab.	-	-	1,1	1,4	1,7	2,0
ATM						
por 100,000 hab.	-	-	0,4	1,5	2,0	3,1
Taxa de						
Bancarização (**)	N/D	2,4%	4,6%	5,1%	5,7%	6,7%
(*) Inclui os municípios sede de província						
(**) Taxa de Bancarização: população bancarizada sobre a população total						
Fonte: EMIS						

B – Banks Operating in Angola in 2007

Tabela 1

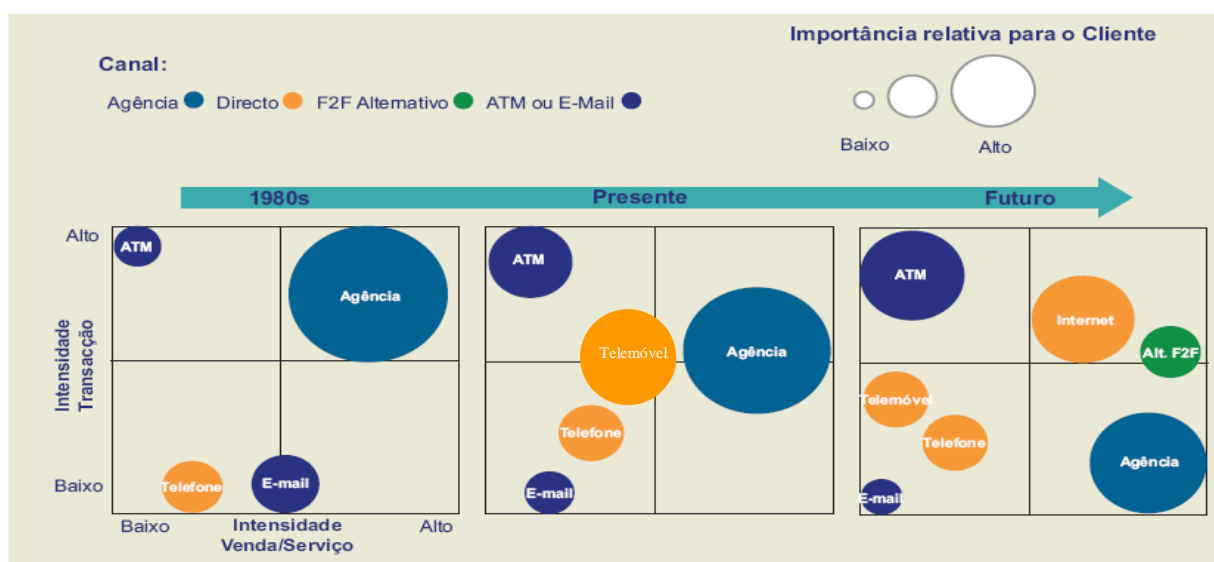
BANCOS A OPERAR EM ANGOLA EM 2007		
SIGLA	NOME	A OPERAR DESDE
BAI	Banco Africano de Investimentos S.A.	1997
BCA	Banco Comercial Angolano S.A.R.L.	1999
BCI	Banco de Comércio e Indústria S.A.R.L.	1991
BMA	Banco Millennium Angola	1993
BESA	Banco Espírito Santo Angola S.A.R.L.	2002
BFA	Banco de Fomento Angola S.A.R.L.	1993
BIC	Banco BIC S.A.	2005
BPC	Banco de Poupança e Crédito S.A.R.L.	1976
BTÁ	Banco Totta de Angola S.A.R.L.	1993
KEVE	Banco Regional do Keve S.A.R.L.	2003
NOVO BANCO	Novo Banco S.A.R.L.	2004
SOL	Banco Sol S.A.R.L.	2001
BPA	Banco Privado Atlântico S.A.	2006
BNI	Banco de Negócios Internacional S.A.	2006
BDA	Banco de Desenvolvimento de Angola E.P.	2006
BANC	Banco Angolano de Negócios e Comércio S.A.	2007
VTB	VTB Angola S.A.	2007

Fonte: BNA

C – Distribution Channels Evolution for the Banking Sector

Figura 2 - Evolução dos canais de distribuição

BANCA EM ANÁLISE
Angola 2008



D – Top Banks Capital Structure and Number of Clients (data referent to 2007)

Bank	Origin	Capital Structure	Number of Clients
1. Banco Africano de Investimento (BAI)	Angolan	17,5% Sonangol 9,5% Crédito Agrícola 7,5% Investec Bank 65,5% Others	127.856
2. Banco Poupança Crédito (BPC)	Angolan	public capital	350.000*
3. Banco Fomento Angola (BFA)	Portuguese	51% BPI 49% UNITEL	400.000
4. Banco BIC de Angola	Angolan	25% Grupo Amorim 25% SPF** 20% Frenando Telles 30% Others	210.331
5. Banco Espírito Santo Angola (BESA)	Portuguese	80% Grupo Espírito Santo 20% Geni Holding	-

Banco Comércio e Indústria (BCI)	Angolan	91% Angolan Government 9% Angolan companies	31.870
Banco Millennium Angola	Portuguese	50,1% BCP 49,9% Sonangol	13.700
Banco Caixa Geral Totta Angola	Portuguese	51% CGD+Santander 49,9% Sonangol	Not in activity

* In 2005

** *Sociedade de Participações Financeiras* (SPF) – Business group of the Angolan President daughter (Isabel dos Santos)

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